



Defining and Reducing Wildlife Hazards to Aviation

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National Wildlife Research Center Scientists Modify Airport Habitats and Study Adjacent Land Uses

Wildlife Services' (WS) National Wildlife Research Center (NWRC) is the only Federal research facility devoted exclusively to resolving conflicts created by the interaction of wildlife and humans through the development of effective, selective, and acceptable methods, tools, and techniques. One of NWRC's field stations is located in Sandusky, Ohio, and is dedicated to providing a scientific foundation for WS operational programs at airports throughout the United States to reduce wildlife hazards to the aviation industry.

In order to be certified for passenger traffic by the Federal Aviation Administration (FAA), most U.S. airports are required to have wildlife hazard management plans in place. In addition, the FAA has strict standards regarding bird strike capabilities of aircraft engines and the placement of wildlife attractants such as waste management facilities near airports. Research and information needs cover a broad spectrum of topics related to understanding the nature of wildlife hazards at airports, developing management tools that will reduce these hazards, and providing airport personnel with information on the latest strategies for controlling wildlife hazards.

Groups Affected by This Problem:

Airline passengers
Airline pilots
Airline administrators
Airport operators



Applying Science and Expertise to Wildlife Challenges

Wildlife Habitat Management and Other Land-Use Studies at Airports

NWRC scientists have been studying height and type of vegetation around airports to determine how to minimize populations of birds and other wildlife that pose hazards to air transportation. For off-airport areas, an improved understanding is needed of the influence that various types of waste management facilities and other land uses (e.g., agricultural practices, wetlands) have on populations and movements of diverse wildlife species. The results of this research will continue to allow the development of strategies to reduce wildlife use of airport facilities/habitats where such use constitutes a health, safety, or nuisance issue.

National Wildlife Strike Database

NWRC is developing a 15-year database that will contain over 60,000 records of wildlife strikes to civil aviation in the U.S. between 1990 and 2004. This database will provide an objective assessment of the nature and magnitude of the wildlife strike problem and a foundation for studies and operational programs dealing with wildlife hazards to aviation. In addition, the database will be used by the aviation industry to develop standards for bird resistance in engines, windshields, and other airframe components.

Wildlife Hazard Management Manual for Airport Operators

Based on research and extensive experience by NWRC scientists and WS biologists, recommendations will be developed for the use of integrated pest management strategies that would be effective at airports. These recommendations are for incorporation into an airport operator's manual as a ready reference.

Major Research Accomplishments:

WS completed and published a National Wildlife Strike Database of 34,000 reports.

WS obtained Food and Drug Administration registration of alpha chloralose used for capturing birds.

WS completed an (FAA) manual entitled, Wildlife Hazards Management at Airports, which has been distributed by the FAA to certified airports in the U.S., and is being translated into French and Spanish for worldwide distribution.

Selected Publications:

Barras, S. C. and R. A. Dolbeer. 2000. Reporting bias in bird strikes at John F. Kennedy International Airport, New York, 1979-1998. Proc. Int'l. Bird Strike Committee. In press.

Barras, S. C., M. S. Carrara, R.B. Chipman and R.A. Dolbeer. 2000. Effects of vegetation management on bird and small mammal use of John F. Kennedy International Airport, New York. Proc. Vertebrate Pest Conference. In Press.

Belant J.L., S. K. Ickes, L. A. Tyson and T. W. Seamans. 2000. Sodium hydroxide as white-tailed deer repellent. Journal of Wildlife Management. In Review.

Blackwell, B. F., T. W. Seamans, D. A. Helon and R. A. Dolbeer. 2000. Early loss of herring gull clutches after egg-oiling. Wildlife Society Bulletin 28:70-75.